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EXAMINER

MISLEH, JUSTIN P

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 08/12/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/768,253

Applicant(s)

SUEMOTO ET AL.

Examiner

Justin P Misleh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 - 20 is/are rejected.
- 7) ☒ Claim(s) 5 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

2. **Claims 5 and 17** are objected to because of the following informalities:
inconsistent with its parent claims.

Claim 5 states, "said zoom lens"; however, Claim 5 previously introduced "a zoom lens group".

Claim 17 states, "and enabling image recording includes"; however, neither Claim 15 nor 16 introduce "enabling image recording". Rather Claim 15 states, "recording an electronic information".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. **Claims 1 – 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaegi et al. in view of Hirasawa.

5. For **Claim 1**, Sakaegi et al. disclose, as shown in figures 1 – 3, 4A, and 5A – 5F and as stated in columns 5 (lines 44 – 56), 6 (lines 6 – 19), 7 (lines 19 – 32), 8 (lines 5 – 8 and 53 – 67), 9 (lines 1 – 65), 10 (lines 54 – 67), and 11 (lines 1 – 32), a digital camera, comprising:

(a) a housing (1; see figure 1) provided with at least a single lens (lens barrel 2) movable along an optical axis in accordance with an instructed magnification (An instructed magnification is inherent at time of lens manufacture, including zero magnification.);

(b) an image sensor (image pickup element 6) disposed for receiving light through the at least single lens (lens barrel 2) and producing an electronic information in accordance therewith;

(c) a memory (recording apparatus 16) connected to the image sensor (image pickup element 6) for receiving and storing data in accordance with the electronic information received from the image sensor (The memory 16 is connected to the image sensor 6 by means of the control circuits shown in figures 2 and 3); and

(d) a controller (control circuit 17) electronically controlling the memory (16; by mean of disc motor control circuit 18) and movement of the at least single lens (lens barrel 2), the controller (control circuit 17) having program logic (flowchart of figure 4A) defining a plurality of operation modes (single shot mode, low speed continuous mode, and high speed continuous mode; designated by switching control unit 10 connected to control circuit 17; see figure 2; column 6, lines 14 – 19; column 7, lines 19 – 21), the

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logic upon initiation determining an operation mode, and if the mode is determined to be an image recording mode (all three modes are image recording modes), the logic causing the controller to commence moving the single lens to initialization positions and performs initialization processing for enabling image recording, and after completion of the initialization processing for enabling image processing, if a command is received for image recording before single lens has arrived at the initialization positions, controls the memory to store data in accordance with the electronic information presently available from the image sensor (see explanation below).

The control circuit (17) operates according the flowchart of figure 4A. As stated in column 10 (lines 54 – 58), photographing and recording operations can be executed immediately after the initiation of a photographing and recording trigger (SW2 of two-stroke release switch 8). Furthermore, Sakaegi et al. state that there exists an “initial status” and a “predetermined status”. The “initial status” is defined as the mirror (4) set down to the photographing optical axis to guide the light to the optical finder and the photometry apparatus (19) and/or the single lens (2) out-of-focus position at start-up (see column 10, lines 63 – 66) as is represented in figure 4A-1. The “predetermined status” is defined as the mirror (4) set up to a predetermined fixed position (see Step S57 in figure 4A-2), the aperture (3) at a predetermined stop (see Step S57 in figure 4A-2), and/or the single lens (2) in an in-focus position (see column 11, lines 1 – 3). Clearly, the “initial status” represents the camera at startup and the flow from Step S50 (in figure 4A-1) until X (in figure 4A-2); and the “predetermined status” represents the camera just before a photographing operation (Step S57 – S68 in figure 4A-2). As stated in column 11 (lines 3 – 9), the transition from “initial status” to “predetermined status” is the initialization

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processing and the commence moving the single lens to an initialization position, as claimed.

It is important to note that Sakaegi et al. only disclose automatic focusing and does not give the option to turn it off; therefore, at startup the camera automatically adjusts the single lens to an in-focus position (initialization position) from a default camera off out-of-focus position. As clearly shown in figures 4A and 5A – 5F, at anytime during the initialization processing and automatic focus adjustment, if the photographing and recording trigger (SW2) is switched, flow immediately begins exposure processing and image recording (figure 4A-2).

However, Sakaegi et al. disclose a lens barrel (2) with at least a single lens disposed therein, although Sakaegi et al. do not disclose a plurality of lens groups. On the hand, Hirasawa also disclose a lens barrel. More specifically, Hirasawa disclose, as shown in figure 3 and as stated in columns 4 (lines 18 – 35 and 58 – 68) and 5 (lines 8 – 13), a plurality of lens groups (101 – 104 including a zooming and focusing lens group). As stated in column 2 (lines 58 – 62), at the time the invention was made, one with ordinary skill in the art would have been motivated to include a plurality of lens groups, as taught by Hirasawa, in the lens barrel, of Sakaegi et al., as a means to provide a lens barrel capable of a zooming operation without image blur, from the start of the operation. Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have include a plurality of lens groups, as taught by Hirasawa, in the lens barrel, of Sakaegi et al.

6. As for **Claim 2**, Sakaegi et al. disclose, as shown in figures 4A-1 and 5F, the digital camera according to Claim 1, wherein said program logic causes the controller

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(17) to initialize the image sensor (Steps S502 and 503) and memory (6) for image recording (Step S522, 521, and 522).

7. As for **Claim 3**, Sakaegi et al. disclose, as shown in figures 4A-1 and 5E, the digital camera according to Claim 2, further comprising a display (7) device controlled by the controller (17), the program logic upon initialization, initializing the display device (6) for displaying information (Step S525).

8. As for **Claim 4**, Sakaegi et al. disclose, as shown in figure 1 and as stated in column 5 (line 49), the digital camera according to Claim 3, wherein said display device is a display.

9. For **Claim 9**, Sakaegi et al. disclose, as shown in figures 1 – 3, 4A, and 5A – 5F and as stated in columns 5 (lines 44 – 56), 6 (lines 6 – 19), 7 (lines 19 – 32), 8 (lines 5 – 8 and 53 – 67), 9 (lines 1 – 65), 10 (lines 54 – 67), and 11 (lines 1 – 32), a method for activating a digital camera having at least a single lens (lens barrel 2) which moves in accordance with an instructed magnification (An instructed magnification is inherent at time of lens manufacture, including zero magnification.), and an image sensing system (image pickup element 6) disposed for receiving an image from the single lens (2) and producing an electronic information representing the image, the method comprising:

(a) determining an operation mode upon power initiation (single shot mode, low speed continuous mode, and high speed continuous mode; designated by switching control unit 10 connected to control circuit 17; see figure 2; column 6, lines 14 – 19; column 7, lines 19 – 21); and

(b) if the operation mode is an image recording mode (all three modes are image recording modes), then:

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(i) initializing the image sensing system for receiving an image from the single lens and producing the electronic information representing the image (see “initialization processing” below);

(ii) moving the single lens (2) to initialization positions (see “initial status” and “predetermined status” below); and

(iii) if a command is received to record an image prior to the lens groups arriving at the initialization positions, and after completion of initializing the image sensing system, recording an electronic information (in memory 16) representing an image, presently available from the image sensing system (see “photographing and recording trigger” below).

The control circuit (17) operates according the flowchart of figure 4A. As stated in column 10 (lines 54 – 58), photographing and recording operations can be executed immediately after the initiation of a photographing and recording trigger (SW2 of two-stroke release switch 8). Furthermore, Sakaegi et al. state that there exists an “initial status” and a “predetermined status”. The “initial status” is defined as the mirror (4) set down to the photographing optical axis to guide the light to the optical finder and the photometry apparatus (19) and/or the single lens (2) out-of-focus position at start-up (see column 10, lines 63 – 66) as is represented in figure 4A-1. The “predetermined status” is defined as the mirror (4) set up to a predetermined fixed position (see Step S57 in figure 4A-2), the aperture (3) at a predetermined stop (see Step S57 in figure 4A-2), and/or the single lens (2) in an in-focus position (see column 11, lines 1 – 3). Clearly, the “initial status” represents the camera at startup and the flow from Step S50 (in figure 4A-1) until X (in figure 4A-2); and the “predetermined status” represents the camera just before a

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photographing operation (Step S57 – S68 in figure 4A-2). As stated in column 11 (lines 3 – 9), the transition from “initial status” to “predetermined status” is the initialization processing and the commence moving the single lens to an initialization position, as claimed.

It is important to note that Sakaegi et al. only disclose automatic focusing and does not give the option to turn it off; therefore, at startup the camera automatically adjusts the single lens to an in-focus position (initialization position) from a default camera off out-of-focus position. As clearly shown in figures 4A and 5A – 5F, at anytime during the initialization processing and automatic focus adjustment, if the photographing and recording trigger (SW2) is switched, flow immediately begins exposure processing and image recording (figure 4A-2).

However, Sakaegi et al. disclose a lens barrel (2) with at least a single lens disposed therein, although Sakaegi et al. do not disclose a plurality of lens groups. On the hand, Hirasawa also disclose a lens barrel. More specifically, Hirasawa disclose, as shown in figure 3 and as stated in columns 4 (lines 18 – 35 and 58 – 68) and 5 (lines 8 – 13), a plurality of lens groups (101 – 104 including a zooming and focusing lens group). As stated in column 2 (lines 58 – 62), at the time the invention was made, one with ordinary skill in the art would have been motivated to include a plurality of lens groups, as taught by Hirasawa, in the lens barrel, of Sakaegi et al., as a means to provide a lens barrel capable of a zooming operation without image blur, from the star of the operation. Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have include a plurality of lens groups, as taught by Hirasawa, in the lens barrel, of Sakaegi et al.

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10. As for **Claim 10**, Sakaegi et al. disclose, as shown in figure 2 and as stated in column 6 (lines 6 – 11), the method of Claim 9, wherein recording electronic information representing an image includes storing data in a memory (16) in accordance with the electronic information.

11. As for **Claim 11**, while Sakaegi et al. disclose an LCD display (7), Sakaegi et al. does not disclose displaying an image in accordance with the electronic information on a display device. However, Official Notice is taken that both the concepts and advantages of providing displaying an image in accordance with the electronic information on a display device are well known and expected in the art as a means to provide a preview feature so as to reduce wasted available memory space.

12. For **Claim 15**, Sakaegi et al. disclose, as shown in figures 1 – 3, 4A, and 5A – 5F and as stated in columns 5 (lines 44 – 56), 6 (lines 6 – 19), 7 (lines 19 – 32), 8 (lines 5 – 8 and 53 – 67), 9 (lines 1 – 65), 10 (lines 54 – 67), and 11 (lines 1 – 32), a method for use in a digital camera having at least a single lens (lens barrel 2) which moves in accordance with an instructed magnification (An instructed magnification is inherent at time of lens manufacture, including zero magnification.), and an image sensing system (image pickup element 6) disposed for receiving an image from the single lens (2) and producing an electronic information representing the image, the method comprising:

(a) determining if an operation mode has changed (The action of powering up the camera changes the camera from an off mode to at least an image recording mode); and

(b) if the operation mode is an image recording mode (single shot mode, low speed continuous mode, and high speed continuous mode; designated by switching control unit 10 are all image recording modes), then:

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(i) initializing the image sensing system for receiving an image from the single lens and producing the electronic information representing the image (see “initialization processing” below);

(ii) moving the single lens (2) to initialization positions (see “initial status” and “predetermined status” below); and

(iii) if a command is received to record an image prior to the lens groups arriving at the initialization positions, and after completion of initializing the image sensing system, recording an electronic information (in memory 16) representing an image, presently available from the image sensing system (see “photographing and recording trigger” below).

The control circuit (17) operates according the flowchart of figure 4A. As stated in column 10 (lines 54 – 58), photographing and recording operations can be executed immediately after the initiation of a photographing and recording trigger (SW2 of two-stroke release switch 8). Furthermore, Sakaegi et al. state that there exists an “initial status” and a “predetermined status”. The “initial status” is defined as the mirror (4) set down to the photographing optical axis to guide the light to the optical finder and the photometry apparatus (19) and/or the single lens (2) out-of-focus position at start-up (see column 10, lines 63 – 66) as is represented in figure 4A-1. The “predetermined status” is defined as the mirror (4) set up to a predetermined fixed position (see Step S57 in figure 4A-2), the aperture (3) at a predetermined stop (see Step S57 in figure 4A-2), and/or the single lens (2) in an in-focus position (see column 11, lines 1 – 3). Clearly, the “initial status” represents the camera at startup and the flow from Step S50 (in figure 4A-1) until X (in figure 4A-2); and the “predetermined status” represents the camera just before a

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photographing operation (Step S57 – S68 in figure 4A-2). As stated in column 11 (lines 3 – 9), the transition from “initial status” to “predetermined status” is the initialization processing and the commence moving the single lens to an initialization position, as claimed.

It is important to note that Sakaegi et al. only disclose automatic focusing and does not give the option to turn it off; therefore, at startup the camera automatically adjusts the single lens to an in-focus position (initialization position) from a default camera off out-of-focus position. As clearly shown in figures 4A and 5A – 5F, at anytime during the initialization processing and automatic focus adjustment, if the photographing and recording trigger (SW2) is switched, flow immediately begins exposure processing and image recording (figure 4A-2).

However, Sakaegi et al. disclose a lens barrel (2) with at least a single lens disposed therein, although Sakaegi et al. do not disclose a plurality of lens groups. On the hand, Hirasawa also disclose a lens barrel. More specifically, Hirasawa disclose, as shown in figure 3 and as stated in columns 4 (lines 18 – 35 and 58 – 68) and 5 (lines 8 – 13), a plurality of lens groups (101 – 104 including a zooming and focusing lens group). As stated in column 2 (lines 58 – 62), at the time the invention was made, one with ordinary skill in the art would have been motivated to include a plurality of lens groups, as taught by Hirasawa, in the lens barrel, of Sakaegi et al., as a means to provide a lens barrel capable of a zooming operation without image blur, from the start of the operation. Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have include a plurality of lens groups, as taught by Hirasawa, in the lens barrel, of Sakaegi et al.

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13. As for **Claim 16**, Sakaegi et al. disclose, as shown in figures 2, 4A-1, 5B, 5D, and 5F and as stated in columns 6 (lines 6 – 11) and 7 (lines 19 – 32), the method of Claim 15, wherein the camera includes a memory (16) and initializing the image sensing system includes initializing the memory for storing data (Step S52, 521, 522) in accordance with the electronic information from the image sensing system.

14. As for **Claim 17** (please see objection above), while Sakaegi et al. disclose an LCD display (7), Sakaegi et al. does not disclose an image preview feature as claimed: enabling image recording includes enabling display of an image in accordance with the electronic information from the image sensing system. However, **Official Notice** is taken that both the concepts and advantages of providing an image preview feature are well known and expected in the art as a means to reduce wasted available memory space.

15. As for **Claim 5**, while Sakaegi et al. disclose a controller for controlling to lens barrel to an in-focus position during initialization, Hirasawa further disclose, as shown in figure 3 and as stated in columns 4 (lines 18 – 35 and 58 – 68) and 5 (lines 8 – 13), wherein said lens groups (101 – 104) comprise a zoom lens group (zooming lens 102) which moves in accordance with an instructed magnification (by means of driver 125) and a focus lens group (compensator 104) for focusing, wherein controlling said focus lens group (104) to follow movement of said zoom lens (102); hence the focus lens group (102) is compensating the movement by the zoom lens (102).

16. As for **Claims 6 and 18**, while Sakaegi et al. disclose the lens barrel in electronic communication with the controller, Hirasawa further disclose, as shown in figure 3 and as stated in columns 4 (lines 18 – 35 and 58 – 68) and 5 (lines 8 – 13), a detector (105) for detecting a movement amount of said zoom lens group (102), and controlling movement

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of the focus lens group (104) in accordance with a movement amount detected by said detector (105). The focus lens group (104) compensates the movements of the zoom lens group (104) to maintain an in-focus image, as stated in column 5 (lines 8 – 13).

17. As for **Claims 7 and 19**, Hirasawa disclose that the detector is comprised of a photosensor, however, Hirasawa do not disclose wherein a cord plate and a terminal form said detector. Official Notice is taken that both the concepts and advantages of forming a detector with a cord plate and terminal are well known and expected in the art as a means to provide precise position detection of all lens groups at all times rather than only detection of the lens groups at certain reference positions.

18. As for **Claims 8 and 20**, Hirasawa disclose, as shown in figure 3, that the zoom lens group (102) and the focus lens group (104) are driven by means of respective stepping motors (110 and 112). Therefore, the detector (105) detects step movement, each step corresponding to a movement range of said zoom lens group (104) from a retracted position to an initialization position divided into a substantially equal number of intervals, with step movement controlled by means of stepping motor (110).

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following is a brief description of each of the cited prior art as labeled on form PTO-892:

- **Prior Art C, D, and E** all disclose a camera with a lens barrel, whose initiation routine includes automatic focusing by commencing movement of the lens barrel,

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wherein each camera includes a shutter priority mode for interrupting the initial automatic focusing of the lens barrel for photographing an image.

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 703.305.8090. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 5:30 PM and on alternating Fridays from 7:30 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wendy R Garber can be reached on 703.305.4929. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
August 7, 2004


TUAN HO
PRIMARY EXAMINER